

REMARKS/ARGUMENTS

The Office Action (1) objected to claim 35 because of informalities; (2) rejected claims 30 and 38 under 35 U.S.C. 102(b) as being anticipated by Amagasa (U.S. 4,750,077); (3) rejected claims 35 and 36 under 35 U.S.C. 103(a) as being unpatentable over Ye, et al. (U.S. 6,488,862) in view of Amagasa.

(1) Regarding the objection of claim 35 due to informalities, applicant has amended the claim to overcome the Examiner's objection. Specifically, Applicants submit that the disclosed process chamber is designed to process a sample positioned inside the process chamber (paragraph [0012] in Summary section). A wafer is a typical sample to be processed according to the present invention. Thus claim 35 discloses that the distance between the electrode and the sample (e.g. wafer) is less than 5 inches.

(2) Regarding the rejection of claims 30 and 38 under 35 U.S.C. 102(b) as being anticipated by Amagasa (U.S. 4,750,077), Applicants submit that Amagasa does not disclose an improved apparatus for semiconductor processing, a helical ribbon electrode, or an electrode coupled to the output of a RF generator.

Regarding claim 30, Applicants submit that Amagasa discloses a coil device for use in a dynamo electric machine or for a protection circuit for AC to DC converter (Col. 1, lines 8-10). The coil disclosed by Amagasa functioned as a low pass filter (Col. 2, line 31).

Applicants submit that there is no mention of semiconductor processing in Amagasa's disclosure. The only mention of semiconductor is semiconductor products (Col. 1, line 51-52), such as semiconductor element (claim 1; claim 8; col. 1, line 15; col. 1, line 18; col. 1, line 25), semiconductor circuit (col. 1, line 11; col. 2, line 65; col. 3, line 36), which is totally distinct from semiconductor processing. Thus, Applicants submit that Amagasa does not disclose an apparatus for semiconductor processing.

Further, Applicants submit that Amagasa does not disclose an electrode. Amagasa discloses an inductive coil with certain value of capacitance to act as a low pass filter in an electrical circuit. In contrast, the present invention discloses an electrode, which is a conductor coupled to the output of a circuit. The electrode according to the present invention serves as an

antenna to radiate energy from a RF generator. There is no mention of electrode, antenna, or a RF generator in Amagasa's disclosure.

Applicants submit that Amagasa's disclosure is from different field of application. The coil of Amagasa serves as a low pass filter for a rectifier circuit, while the coil of the present invention serves as an electrode for an RF generator to radiate energy.

Regarding claim 38, Applicants submit that Amagasa does not disclose an electrode (see above), which is coupled to the output of an RF generator. The coil of Amagasa serves as a low pass filter for a rectifier circuit, while the coil of the present invention is coupled to the output of an RF generator to radiate energy.

In sum, Applicants submit that Amagasa does not disclose various elements of the present invention, namely the field of semiconductor processing, the coil serving as an electrode, coupled to an output of an RF generator to radiate energy, and thus the present invention cannot be anticipated from Amagasa's disclosure.

(3) Regarding the rejection of claims 35 and 36 under 35 U.S.C. 103(a) as being unpatentable over Ye, et al. (U.S. 6,488,862) in view of Amagasa, Applicants submit that there is no motivation to combine the references of Ye, et al. with Amagasa. Ye, et al. discloses an apparatus for semiconductor processing, while Amagasa discloses a coil for a dynamo electric machine or for a protection circuit.

As discussed above, Amagasa does not mention semiconductor processing, and does not mention an electrode for an RF generator. Thus Applicants submit that the combination of Amagasa to Ye, et al. is improper.

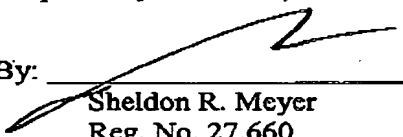
Ye, et al. discloses a plasma coil with a circular cross section (element 12 of Fig. 1, and also in all Figures of U.S. patent 6,071,372 which is incorporated by reference by Ye, et al. in Col. 8, lines 46-52). Ye, et al. does not disclose a coil having a rectangular cross section. Since there is no motivation to combine Amagasa with Ye, et al., Applicants submit that the present invention is novel and non-obvious over the prior art.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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